

**REMARKS**

The Office Action dated April 6, 2011 have been received and reviewed. This response is directed to that action.

The applicants respectfully request reconsideration in view of the foregoing remarks.

**Claim Rejections- 35 U.S.C. §103**

The Examiner rejected claims 17, 20, 23, 24, 26, 30, and 31 under 35 U.S.C. §103(a) as obvious over Stora (US 6,403,109) in view of Zastrow et al. (US 5,961,988); claims 18 as obvious over Stora in view of Zastrow and further in view of Gross et al. (US 5,637,318); claims 21 and 22 as obvious over Stora in view of Zastrow and further in view of Gross et al. (US 5,643,601); and claim 19 as obvious over Stora in view of Zastrow and Gross, and further in view of Pelle (US 5,811,083) and Nakanishi (US 6,576,623). The applicants respectfully traverse these rejections.

Stora is directed to a transparent perfume emulsion composition substantially free of volatile organic solvents. As cited by the Examiner, Stora's Example 1 teaches a formulation comprising 2.23% perfluorodecaline, a fluorinated hydrocarbon; 24.95% Silicone DC45, a silicone polymer; and 10.05% of a perfume oil base. While the concentrations of the above-mentioned components are vastly greater than in the presently claimed invention, the Examiner stated that it would have been obvious to a skilled artisan to dilute the concentration of the formulation of Stora in order to achieve the presently claimed invention. The Examiner reasoned that it would be within the ordinary level of skill in the art to dilute Stora's formulation with

water by a factor of five because dilution is known to “maximize efficacy while minimizing cost and negative side effects in order to yield predictable results since the formulation components would have retained their respective known functions upon dilution.” (Office Action, page 5, lines 6-8). The applicants respectfully, but strongly disagree with the Examiner’s assertions.

A skilled artisan would not find it obvious to modify Stora by diluting the formulation in Example 1 because doing so would be outside the ordinary level of skill in the art. The proposed dilution would render Stora unsuitable for its intended use and, contrary to the Examiner’s assertion, would *not* lead to predictable results, but would completely change the overall composition of the formulation so much so that a skilled artisan would not be able to predict with any degree of certainty whether the resulting formulation would actually

The Examiner specifically suggested that the “aqueous dilution of Stora’s Example 1 by a factor of five would have resulted in 0.446 wt.% perfluorodecaline, 4.99 wt.% of silicone polymer, and 2.01 wt.% of perfume oil base”, which values would lie within the instantly claimed range. (Office Action, page 5, lines 13-16). Before discussing the merits of this proposed dilution, the applicants submit that the Examiner’s calculations are wrong, and must be corrected. To wit, Stora’s formulation (Example 1) is comprised of the following:

Perfuming base	10.05%
Silicone DC 345	24.93%
Perfluorodecaline	2.23%
Water	21.35%
1,2-Butanediol	36.43%
Surfactants	5.000%

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Total:	100%
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If one were to dilute this composition with water by a factor of five, as proposed by the

Examiner, the following composition would result:

Perfuming base	10.05 / 5	=	2.01%
Silicone DC 345	24.93/ 5	=	4.99%
Perfluorodecaline	2.23/ 5	=	0.446%
Water	21.35* 5	=	106.75%
1,2-Butanediol	36.43/ 5	=	7.29%
Surfactants	5.000/5	=	1.00%
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Total:			122.486%

The values reported by the Examiner in the Office Action were not normalized to account for the dilution, and are therefore erroneous. After properly normalizing the composition to 100%, which the Examiner failed to calculate, the following composition would result:

Perfuming base	1.65%
Silicone DC 345	4.07%
Perfluorodecaline	0.36%
Water	87.15%
1,2-Butanediol	5.95%
Surfactants	0.82%
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Total:	100%

While the values still theoretically fall within the claimed composition, the correct resulting composition, after dilution, must be viewed as a whole in order to properly analyze the Examiner's proposed modification of the prior art.

With that out of the way, the applicants submit that dilution of Stora's formulation would likely render Stora unsuitable for its intended use, and would surely change Stora's principle operation. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Moreover, if the proposed modification would change the principle operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obviousness. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). There are several consequences of the proposed dilution that would occur to render Stora unsuitable or change the principle operation.

First, the addition of water through an aqueous dilution would substantially change the formulation's refractive index. Indeed, Stora clearly and unequivocally stresses the importance of the refractive index of the emulsion, and the difference between the aqueous phase refractive index and the oil phase refractive index. In particular, the formulation has a refractive index of between 1.40 and 1.44, and a difference between oily phase and aqueous phase of 0.003 or less. (col. 2, lines 57-65; col. 4, lines 60-62) Since the refractive index of water is 1.33, a five-fold increase in water would substantially lower the formulation's refractive index, and would further increase the difference between the refractive index of the two phases. Due to the change in refractive indices, the composition is unlikely to be transparent since the transparency of the composition is directly dependent upon the refractive index. (See col. 2, lines 57-65). Accordingly, Stora would therefore be rendered unsuitable for its intended use as a *transparent* perfume composition.

Second, the perfuming base would be reduced from over 10% to less than 2% of the total concentration of the composition, which will have a substantial impact on the ability to carry and maintain a scent. In fact, Stora's requires that the oily phase comprise between 15-60 wt.% of perfuming ingredients, (col. 5, suggesting that Stora recognized the need to maintain a minimum

perfume oil concentration in order to be effective. Thus, reducing the perfume oil content would render Stora unsuitable as a perfume composition.

Third, the reduction in concentration of the silicone oil and PFD would have a significant effect of the volatility of the perfume composition in use such that the perfume oil may not sufficiently volatilize in the air. With an already reduced amount of perfume oil to begin with, a reduction in volatilizing substances would render the composition even less effective, and, ultimately, unsuitable for its intended use.

There is also nothing in Stora or in the knowledge of the skilled artisan to suggest that the proposed dilution would yield a predictable result. For example, by diluting the formulation and thereby increasing the water content to 87.15 wt.%, there is a real question as to whether Stora's emulsion would remain stable, or whether the emulsion would form at all. In fact, the maximum amount of water permitted by Stora in the aqueous phase is 65 wt.% (col. 5, line 5), likely in order to ensure the stable emulsion. However, the proposed diluted formulation would have over 92 wt.% water in the aqueous phase, in clear contrast to Stora's maximum permissible amount. A skilled artisan could not reasonably predict whether a stable emulsion will form in the face of a drastic dilution. Additionally, it is unusual, to say the least, to suggest that an oily phase be diluted with water, as suggested by the Examiner. There are inherent uncertainties when diluting an oily phase with water that the skilled artisan would have to contend with.

The disclosures of Zastrow, Gross, Pelle and Nakanishi fail to remedy any of the deficiencies discussed hereinabove.

Based on the foregoing remarks, the applicants submit that a *prima facie* case of

obviousness cannot be established, and respectfully request that the Examiner withdraw these rejections.

**CONDITIONAL PETITION FOR EXTENSION OF TIME**

If entry and consideration of the amendments above requires any further extension of time, Applicants respectfully requests that this be considered a petition therefore. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

**ADDITIONAL FEE**

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,

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